

REMARKS/ARGUMENTS

Favorable reconsideration of this application in view of the following remarks is respectfully requested.

Claims 1-3, 5-10 and 12-18 are presented for examination on this application. Claims 4 and 11 were previously canceled without prejudice or disclaimer. Claims 14-18 have been withdrawn from consideration. Claim 1 is amended to correct a spelling error without the introduction of any new matter.

The outstanding Official Action presents a rejection of Claims 1-3, 5-10, 12, and 13 (erroneously stated to be Claims 1-13, even though Claims 4 and 11 have previously been canceled and the "Office Action Summary" sheet acknowledges that only Claims 1-3, 5-10 and 12-18 are pending) under 35 U.S.C. § 103(a) over what is alleged in the outstanding Action to be "Applicant's Admitted Prior Art" (AAPA) in view of Yu (U.S. Patent No. 6,225,173).

Applicant begins by noting that FIGS. 7 and 8 represent problems that can occur when forming a gate insulating film that were recognized by the applicant and, accordingly, are in no way AAPA.

Furthermore, the outstanding Action errs at page 3 thereof by stating that col. 4, lines 49-52 and Figures 1-5 of Yu disclose enlarging the width of the first trench using an etchant having an etching selectivity between an insulating film and a semiconductor substrate. In this respect, col. 4, lines 49-52 of Yu are part of a description of a process for removing a gate oxide film 35, not a description of a process for enlarging a width of a trench, much less a process for widening a trench using an etchant having the claimed etching selectivity between an insulating film and a semiconductor substrate as specified by base independent Claims 1 and 7. As explained at col. 4, lines 49-50, of Yu, the wet chemical etch suggested here for removing oxide 35 is selective to this insulating film.

Thus, the chemical etchant taught here cannot have the claimed selectivity between the insulating film and the substrate as it is specifically taught to have the insulating film selectivity. Consequently, the rejection of Claims 1-3, 5-10, 12, and 13 that either directly (independent base Claims 1 and 7) or indirectly (dependent Claims 2, 3, 5, 6, 8-10, 12, and 13) recite this limitation is traversed.

The outstanding Action is also improperly relying on this etching of oxide film 35 that has nothing to do with the etching of the substrate illustrated by FIG. 5 of Yu as forming the ultra-shallow source and drain extensions that are relied on as the reason why the artisan would incorporate the teachings of Yu. However, if the motivation for the artisan to widen the existing trench is to form “an ultra-shallow source extension and an ultra-shallow drain extension” as alleged at the middle of page 3 of the outstanding Action, then the artisan would have also followed the teaching at col. 5, lines 17-20 as to substrate 14 being “over-etched to form ultra-shallow source and drain extensions.” After all, the rationale offered is the seeking of the benefit of having ultra-shallow source and drain extensions, not some oxide removal step preceding that formation of the ultra-shallow source and drain extensions step by removal of substrate material.

Moreover, if the artisan seeking the formation of the ultra-shallow source extension and an ultra-shallow source and drain extensions taught by Yu applied a substrate selective etchant so as to over-etch the substrate and form the ultra-shallow source and drain extensions, this is still not the subject matter of Claims 1 and 7, or that of the claims dependent thereon, because there is still no reasonable teaching or suggestion for the artisan to use an etchant with the claimed selectivity. See In re Kotzab, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) as follows:

While the test for establishing an implicit teaching, motivation, or suggestion is what the combination of [reference teachings] would have suggested to those of ordinary skill in the art, the [reference teachings] cannot be viewed in the abstract. Rather, they

must be considered in the context of the teaching of the entire reference. Further, a rejection cannot be predicated on the mere identification in [a reference] of individual components of claimed limitations. Rather, particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed.

Here, these required particular findings that must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected an etchant having an etching selectivity between an insulating film and a semiconductor substrate, as specified by base independent Claims 1 and 7, to form the are exactly what is missing. Thus, this improper rejection of Claims 1-3, 5-10, 12, and 13 that either directly (independent base Claims 1 and 7) or indirectly recite (dependent Claims 2, 3, 5, 6, 8-10, 12, and 13) this limitation is traversed for this reason as well.

Accordingly, as no further issues are believed to remain outstanding in the present application, it is believed that this application is clearly in condition for formal allowance and an early and favorable action to this effect is earnestly and respectfully requested.

Respectfully submitted,

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